

WHAT IS CLAIMED IS:

1. A heat treatment method comprising the step of:
heating a treatment object by irradiating it through radiation from a lamp light source,
wherein the radiation from said lamp light source lasts 0.1 to 20 seconds at a time,
wherein the radiation from said lamp light source is repeated several times.

2. A heat treatment method comprising the step of:
heating a treatment object by irradiating it through radiation from a lamp light source,
wherein the radiation from said lamp light source is pulsatively repeated several times such that the treatment object holds the temperature to its highest for 0.5 to 5 seconds.

3. A heat treatment method comprising the steps of:
holding a treatment object in a processing chamber filled with a coolant; and
heating the treatment object by irradiating it through radiation from a lamp light source,
wherein the radiation from said lamp light source is held for 0.1 to 20 seconds at a time,
wherein the radiation from said lamp light source is repeated several times.

4. A heat treatment method comprising the steps of:
holding a treatment object in a processing chamber filled with a coolant; and
heating the treatment object by irradiating it through radiation from a lamp light source,
wherein the radiation from said lamp light source is repeated several times such that the treatment object holds the temperature to its highest for 0.5 to 5 seconds.

5. A heat treatment method comprising the steps of:
 - holding a treatment object in a processing chamber filled with a coolant; and
 - heating the treatment object by irradiating it through radiation from a lamp light source,
 - wherein said lamp light source is turned on and the radiation from said lamp light source is held for 0.1 to 20 seconds at a time, while an amount of supply of the coolant is reduced,
 - wherein said lamp light source is turned off while a treatment of increasing the amount of supply of the coolant as one cycle is repeated several times.
 6. A heat treatment method comprising the steps of:
 - holding a treatment object in a processing chamber filled with a coolant; and
 - heating the treatment object by irradiating it though radiation from a lamp light source,
 - wherein said lamp light source is turned on while an amount of supply of the coolant is reduced,
 - wherein said lamp light source is turned off while a treatment of increasing the amount of supply of the coolant as one cycle is repeated several times, after the treatment object holds the temperature to its highest for 0.5 to 5 seconds.
 7. A heat treatment method according to claim 1, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.
 8. A heat treatment method according to claim 2, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.

9. A heat treatment method according to claim 3, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.

10. A heat treatment method according to claim 4, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.

11. A heat treatment method according to claim 5, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.

12. A heat treatment method according to claim 6, wherein said lamp light source is selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon lamp, a high pressure mercury lamp, a high pressure sodium lamp and an excimer lamp.